MDC Resource Science

Monitoring Furbearer Abundance

Science Notes

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Monitoring furbearer abundance with sign station surveys and archer observations

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The intent of sign stations and archer observations are to monitor trends. While not capable of determining population size, these monitoring efforts provide valuable information on population trends.

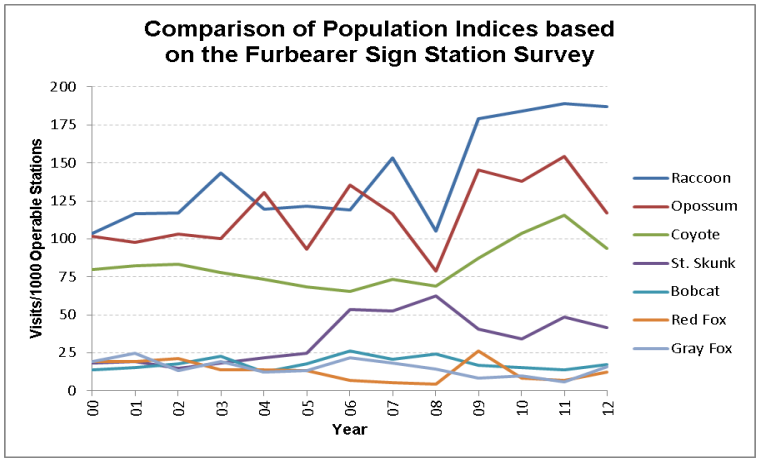
Furbearer Sign Station Survey

Summary

Monitoring the distribution and abundance of furbearers can be important for documenting long term population trends. Sign station indices can detect large changes in furbearer populations at low cost relative to other methods. The surveys use 36-inch diameter circles of sifted soil, set up every 0.3 miles along shoulders of gravel roads. Within each station is a scent attractant disc. Stations are set up in a day and checked the next day for presence of animal tracks. We use sign station surveys to collect trend data for 8 terrestrial furbearer species including raccoon, red and gray fox, coyote, skunks, bobcats, opossum, and badger. Sign station surveys were initiated in 1977. Currently we have twenty-five routes, assigned to individual counties. Each route has 50 stations.

Results

Overall, trends indicate that most furbearer species have steady to slightly increasing populations. Both red and grey fox populations have been decreasing over time. These trends are also reflected in bowhunter observations and harvest records.



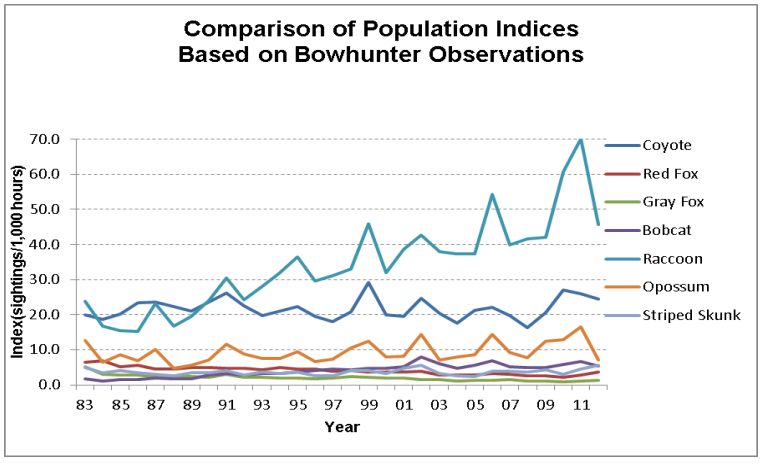
Archer Indices

Summary

Citizen science—since 1983 we have conducted annual surveys of wildlife populations via the archer's diary survey. Each fall, several thousand archery deer and turkey hunters keep daily sighting records for furbearers, other small game animals, deer, and turkeys. This group provides an important monitoring service and enables us to track population indices and range expansion of select terrestrial species. We use the number of sightings of each species divided by the total number of hours hunted to calculate a sighting rate. Rates are expressed as the number of sightings per 1,000 hours hunted.

Results

Based on these indices, raccoon and bobcat populations have increased over time. Striped skunk and coyote populations have held relatively steady, while sightings per thousand hours of hunting for red and gray fox species have declined.



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